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Patent Claims

1. Valve arrangement with a housing, an inlet connection  
5 and an outlet connection, which are connected with  
each other via a flow path, in which is located a  
closing device, which has a valve seat and a valve  
element interacting with the valve seat, the valve  
element being loaded in the direction of the valve  
10 seat by a resetting device and being acted upon on the  
side facing the valve seat by a pressure in a first  
pressure chamber, said pressure corresponding to the  
pressure in the inlet connection, when the closing de-  
vice is closed, and on the side facing away from the  
15 valve seat by the pressure in a second pressure cham-  
ber, which is connected with the outlet connection via  
a channel arrangement, in which is located at least  
one auxiliary valve, and with the first pressure cham-  
ber via a throttle, **characterised in** that the channel  
20 arrangement (14) ends in a suction nozzle arrangement  
(18), which is located in the flow path.
2. Valve arrangement according to claim 1, characterised  
in that the suction nozzle arrangement (18) has at  
25 least one suction nozzle (20, 21), which is directed  
towards the outlet connection (4) and has a bordering  
wall, whose outside is exposed to the fluid flowing in  
the flow path.
- 30 3. Valve arrangement according to claim 2, characterised  
in that the suction nozzle arrangement (18) blocks a  
fluid entry into the channel (14).

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4. Valve arrangement according to one of the claims 1 to 3, characterised in that the suction nozzle arrangement (18) is connected with the housing (2) in at least two positions.
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5. Valve arrangement according to one of the claims 1 to 4, characterised in that the suction nozzle arrangement (18) has a body, which is located in extension of a pilot valve seat (17) of the auxiliary valve (15).
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6. Valve arrangement according to one of the claims 1 to 5, characterised in that the suction nozzle arrangement (18) has a pipe (19), which has a slot (20) in the direction of the outlet connection.
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7. Valve arrangement according to claim 6, characterised in that the pipe (19) is connected with the channel (14) on a frontside.
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8. Valve arrangement according to one of the claims 1 to 7, characterised in that the pipe (19) is located in the area of a diameter of the outlet connection.
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9. Valve arrangement according to one of the claims 1 to 5, characterised in that the suction nozzle arrangement (18) has an annular nozzle (21), whose opening is directed towards the outlet connection.
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10. Valve arrangement according to one of the claims 1 to 9, characterised in that the suction nozzle arrangement (18) is located in a section (24) of the flow path with reduced cross-section.